

What is claimed is:

1. A method for controlling a storage system including  
a host computer;

5 a first storage controller connected communicably to said  
host computer, for receiving a data frame transmitted from said  
host computer and executing data input to and data output from  
a first storage device in response to a data input/output request  
described in said data frame; and

10 a second storage controller connected communicably to said  
first storage controller,  
comprising:

relaying by said first storage controller, upon receipt  
of said data frame transmitted from said host computer, said  
data frame to said second storage controller in response to  
15 information described in said data frame.

2. A method for controlling a storage system according to  
claim 1, comprising, by said second storage controller,  
receiving a data frame transmitted from said host computer to  
20 said first storage controller and relayed by said first storage  
controller, and executing data input to and data output from  
a second storage device in response to said data input/output  
request described in said data frame.

25 3. A method for controlling a storage system according to  
claim 1, wherein said data frame is a data frame conforming  
to Fiber Channel Protocol, and wherein said relaying is conducted  
by a Fiber Channel switch included in said first storage  
controller.

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4. A method for controlling a storage system according to claim 3, wherein said information is at least one of:

information for specifying a Fiber Channel port of said source of said data frame;

5 information for specifying a Fiber Channel port of said destination of said data frame; and

information for specifying said storage devices.

5. A method for controlling a storage system according to claim 3, wherein said data frame includes therein described as said information, at least one of:

information for specifying a Fiber Channel port of the source of said data frame;

15 information for specifying a Fiber Channel port of the destination of said data frame; and

information for specifying said storage devices, and wherein

said first storage controller stores access limit information indicating permission/rejection of an access of a Fiber Channel port of the source to said Fiber Channel port of the destination or to said storage device of the destination, comprising:

20 by said first storage controller, when receiving said data frame from said host computer, referring to said access limit information to check whether said Fiber Channel port of the source of said data frame is permitted to make access to said Fiber Channel port of the destination or to said storage device of the destination; and

25 relaying by said first storage controller said data frame to said second storage controller only when said access is

permitted.

6. A method for controlling a storage system according to claim 4, wherein

5       said data frame includes therein described as the information:

          information for specifying a Fiber Channel port of the source of said data frame; and

          information for specifying a Fiber Channel port of the  
10       destination of said data frame; and wherein

          said first storage controller stores information indicating priority of a data input/output process corresponding to said data frame, by relating to a combination of a Fiber Channel port of the source and a Fiber Channel port of the  
15       destination, comprising:

          by said first storage controller, when receiving said data frame from said host computer, executing a data input/output process for said storage device connected to said port of the destination of said data frame, in conformity with said  
20       information indicating said priority.

7. A method for controlling a storage system according to claim 6, wherein said information indicating priority is information indicative of timing to execute the data  
25       input/output process for said storage device.

8. A method for controlling a storage system according to claim 4, wherein said information for specifying said storage device is an identifier given to a logical storage area which  
30       is organized in zones in a storage area provided by said storage

device.

9. A method for controlling a storage system according to claim 8, wherein said storage device is a disk drive.

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10. A storage system comprising:

a first storage device; and

a first storage controller connected communicably to a host computer, for receiving a data frame transmitted from said host computer and executing data input to and data output from a first storage device in response to a data input/output request described in said data frame;

wherein said first storage controller comprises a relay device that relays to a second storage controller a data frame transmitted from said host computer when said data frame transmitted from said host computer is a data frame that is permitted to be relayed to said second storage controller.

11. A storage system according to claim 10, wherein said first storage controller further comprises a processor for referring to information described in said data frame transmitted from said host computer and judging whether said data frame transmitted from said host computer is a data frame that is permitted to be relayed to said second storage controller.

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12. A storage system according to claim 11, wherein when said data frame transmitted from said host computer is a data frame that is not permitted to be relayed to said second storage controller, said processor transmits said data frame transmitted from said host computer, to another processor in said first

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storage controller.

13. A storage system according to claim 10, wherein

5 said first storage controller further comprises a memory for storing information on data frames that are permitted to be relayed to said second storage controller.

14. A storage system according to claim 13, wherein

10 said first storage controller further comprises a processor for referring to information described in said data frame transmitted from said host computer and information stored in said memory and judging whether said data frame transmitted from said host computer is a data frame that is permitted to be relayed to said second storage controller.

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15. A storage system according to claim 14, wherein

when said data frame transmitted from said host computer is a data frame that is not permitted to be relayed to said second storage controller, said processor transmits said data  
20 frame transmitted from said host computer, to another processor in said first storage controller.

16. A storage system according to claim 10, wherein said data frame is a data frame conforming to Fiber Channel Protocol.

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17. A storage system according to claim 10, wherein said relay device is a Fiber Channel switch.

18. A storage system according to claim 11, wherein said  
30 information described in said data frame includes any one of:

information for specifying a Fiber Channel port of the source of said data frame;

information for specifying a Fiber Channel port of the destination of said data frame; and

5 information for specifying said first storage device.

19. A storage system according to claim 16, wherein

said processor checks whether said data frame transmitted from said host computer is permitted to make access to said  
10 Fiber Channel port of the destination or to said first storage device of the destination.

20. A storage controller comprising:

means connected communicably to a host computer, for  
15 receiving a data frame transmitted from said host computer and executing data input to and data output from a first storage device in response to a data input/output request described in said data frame;

means connected communicably to another storage controller,  
20 for receiving a data frame and executing data input to and data output from a second storage device in response to a data input/output request described in said data frame;

means for, when receiving a data frame transmitted from said host computer, relaying said data frame to said another  
25 storage controller in response to information described in said data frame,

wherein said data frame is a data frame conforming to Fiber Channel Protocol, said relaying being conducted by a Fiber Channel switch included in said first storage controller,  
30 wherein said information is at least one of:

information for specifying a Fiber Channel port of the source of said data frame;

information for specifying a Fiber Channel port of the destination of said data frame; and

5 information for specifying said storage device, and wherein said data frame includes therein described as the information:

information for specifying a Fiber Channel port of the source of said data frame; and

10 information for specifying a Fiber Channel port of the destination of said data frame;

means for storing information indicating priority of a data input/output process corresponding to said data frame, by relating to a combination of said Fiber Channel port of the source and said Fiber Channel port of the destination; and

15 means for, when receiving said data frame from said host computer, executing a data input/output process for said storage device connected to a port of the destination of said data frame, in conformity with said information indicative of priority.

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